

IN THE CLAIMS

Please amend Claims 2 to 8, 10, 14, 15, 17 and 18 as shown below. The claims, as pending in the subject application, read as follows:

1. (Original) An image processing method of analyzing a pixel value of a pixel of interest and pixel values in an adjacent region of the pixel of interest, the adjacent region being formed by neighboring pixels of the pixel of interest, and setting an image correction condition, comprising the steps of:

dividing an adjacent region of a first pixel of interest into a plurality of regions formed from pixel values in a scan direction and in a direction perpendicular to the scan direction, analyzing the pixel values in each of the divided regions, and holding an analysis result for each of the divided regions;

obtaining an image correction condition for the first pixel of interest from the analysis result of each divided region belonging to the adjacent region of the first pixel of interest and correcting the first pixel of interest using the image correction condition;

in order to obtain an image correction condition for a second pixel of interest moved from the first pixel of interest in the scan direction, executing analysis for a difference region between the first adjacent region and an adjacent region of the second pixel of interest on the basis of pixel values in a region which belongs to the difference region and is formed from pixel values in the scan direction and in the direction perpendicular to the scan direction, and holding an analysis result; and

obtaining the correction condition for the second pixel of interest from the analysis result of the region belonging to the adjacent region of the second pixel of interest and correcting the second pixel of interest using the image correction condition.

2. (Currently Amended) An image processing apparatus for performing color matching by using a human color appearance model, comprising:

~~an input section a manager, arranged to input a distance between an image and a viewer~~ manage feature values of divided regions, and a resolution of the image wherein each feature value is a statistic of pixels contained in each divided region;

a calculator, arranged to calculate a feature value of a region of interest containing a pixel of interest based on the feature values of the divided regions contained in the region of interest; and

a processor, arranged to perform color matching by using the human color appearance model ~~define regions based on a plurality of field angles with respect to a pixel the feature value of the region of interest on the image, on the basis of the input distance and resolution, thereby performing color matching,~~

wherein the divided region is divided from the region of interest in a scan direction, and said manager calculates a feature value of ~~processor performs arithmetic operation for a difference region between the regions based on the plurality of field angles, which are generated by moving the pixel of interest, to obtain an arithmetic result for the regions based on the plurality of field angles after movement of the pixel of interest is moved in the scan direction.~~

3. (Currently Amended) The apparatus according to claim 2, wherein said calculator calculates the feature values of at least 2°, 4°, and 10° are used as the a plurality of ranges corresponding to field angles of 2°, 4°, and 10°.

4. (Currently Amended) The apparatus according to claim 2, wherein

~~the plurality of said processor approximates circular regions are approximated by~~
~~corresponding to the plurality of field angles to square regions to increase the speed of~~
~~processing in the regions.~~

5. (Currently Amended) The apparatus according to claim 2, wherein
said processor sets determines a viewing condition parameter for the pixel of interest by
~~using pixel values of regions corresponding to the plurality of field angles based on the~~
feature value of the region of interest.

6. (Currently Amended) The apparatus according to claim 2, wherein
~~on the basis of the uniformity of the image within the field angle of a color chip in the~~
~~human color appearance model, said processor employs a parameter selected from the~~
~~group consisting of "larger than the field angle of the color chip" or "not more than the~~
~~field angle of the color chip" as an average surrounding viewing condition parameter the~~
statistic is maximum and minimum values of the pixel values.

7. (Currently Amended) The apparatus according to claim 2, wherein
~~said processor sets the average relative luminance of a background region with respect to~~
~~the pixel of interest as a viewing condition parameter for the pixel of interest the statistic is~~
an average value of the pixel values.

8. (Currently Amended) The apparatus according to claim 2, wherein

said processor increases a speed of processing performed near an edge of the image by ~~setting~~ sets a specific value for omitted pixels in ~~an adjacent~~ the region of interest and ~~a background region~~ when a near edge of an image is processed.

9. (Original) The apparatus according to claim 8, wherein the specific value is selected from the group consisting of a luminance of 100%, a luminance of 20%, and the relative luminance of a surrounding region.

10. (Currently Amended) The apparatus according to claim 3 ~~[[2]]~~, wherein said processor determines a viewing condition parameter for each object on a vector image by using the plurality of ranges of regions corresponding to the plurality of field angles.

11. (Currently Amended) The apparatus according to claim 2, further comprising a sensor, arranged to measure ~~the~~ a distance between ~~the~~ an image and ~~the~~ a viewer.

12. (Currently Amended) The apparatus according to claim 2, further comprising an interface, arranged to input ~~the~~ a distance between ~~the~~ an image and ~~the~~ a viewer.

13. (Currently Amended) The apparatus according to claim 2, further comprising an interface, arranged to input ~~the~~ a relative luminance of a portion selected from the group consisting of ~~the~~ an edge and ~~the~~ a frame of ~~the~~ an image.

14. (Currently Amended) An image processing method of performing color matching by using a human color appearance model, comprising the steps of:

~~inputting a distance between an image and a viewer, and a resolution of the image managing feature values of divided regions, wherein each feature value is a statistic of pixels contained in each divided region;~~

~~calculating a feature value of a region of interest containing a pixel of interest based on the feature values of the divided regions contained in the region of interest; and~~

~~a processing step of performing color matching by using the human color appearance model defining regions based on a plurality of field angles with respect to a pixel the feature value of the region of interest on the image, on the basis of the input distance and resolution, thereby performing color matching,~~

~~wherein the divided region is divided from the region of interest in a scan direction, and the managing step calculates a feature value of a difference region between the regions of interest before and after the pixel of interest is moved in the scan direction.~~

15. (Currently Amended) The method according to claim 14, further comprising the step of, in performing color matching, performing arithmetic operation for a difference region between the regions based on the plurality of field angles, which are generated by moving wherein the processing step sets a viewing condition parameter for the pixel of interest, to obtain an arithmetic result for the regions based on the feature value plurality of field angles after movement of the region pixel of interest.

16. (Currently Amended) A computer program product storing stored on a computer readable medium comprising a computer program code[[,]] for an image processing method of analyzing a pixel value of a pixel of interest and pixel values in an adjacent region of the pixel of interest, which is formed by neighboring pixels of the pixel of interest, and setting an image correction condition, said method comprising ~~process~~ procedure code for the steps of:

dividing an adjacent region of a first pixel of interest into a plurality of regions formed from pixel values in a scan direction and in a direction perpendicular to the scan direction, analyzing the pixel values in each of the divided regions, and holding an analysis result for each of the divided regions;

obtaining an image correction condition for the first pixel of interest from the analysis result of each divided region belonging to the adjacent region of the first pixel of interest and correcting the first pixel of interest using the image correction condition;

to obtain an image correction condition for a second pixel of interest moved from the first pixel of interest in the scan direction, executing analysis for a difference region between the first adjacent region and an adjacent region of the second pixel of interest on the basis of pixel values in a region which belongs to the difference region and is formed from pixel values in the scan direction and in the direction perpendicular to the scan direction, and holding an analysis result; and

obtaining the correction condition for the second pixel of interest from the analysis result of the region belonging to the adjacent region of the second pixel of interest and correcting the second pixel of interest using the image correction condition.

17. (Currently amended) A computer program product ~~storing~~ stored on a computer readable medium comprising a computer program code~~[[,]]~~ for an image processing method of performing color matching by using a human color appearance model, ~~said method comprising process procedure code for the steps of:~~

~~inputting a distance between an image and a viewer, and a resolution of the image managing feature values of divided regions, wherein each feature value is a statistic of pixels contained in each divided region;~~

~~calculating a feature value of a region of interest containing a pixel of interest based on the feature values of the divided regions contained in the region of interest; and~~

~~performing color matching by using the human color appearance model defining regions based on a plurality of field angles with respect to a pixel the feature value of the region of interest on the image, on the basis of the input distance and resolution, thereby performing color matching,~~

~~wherein the divided region is divided from the region of interest in a scan direction, and the calculating step calculates a feature value of a difference region between the regions of interest and after the pixel of interest is moved in the scan direction.~~

18. (Currently amended) The product according to claim 17, ~~further comprising process procedure code for, in performing color matching, performing arithmetic operation for a difference region between the regions based on the plurality of field angles, which are generated by moving wherein the processing step sets a viewing condition parameter for the pixel of interest, to obtain an arithmetic result for the regions~~

based on the feature value plurality of field angles after movement of the region pixel of interest.